

## Neurodegenerative Case Study

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## Abstract

This qualitative case-study discusses the experiences of one individual with a neurodegenerative disease which is largely undiagnosed. This study provides the reader with a history of the subject's mental health diagnoses as well as their symptomology and the progression of the illness. There is a specific focus on the patient's history of Bipolar I and prior diagnosis of a meningioma. A detailed discussion of the patient's presenting problems is also discussed in this study.

## Introduction

The researchers in this brief case-study sought to present a complicated case of a largely undiagnosed neurodegenerative disease in an effort to educate others about various symptomologies and how it effects the patient as well as the family.

## Background information

Prior to the onset of current symptomology, the subject had a significant mental health history. This history complicates current functioning and diagnoses as well as provides problematic pharmaceutical measure to alleviate symptoms.

## Beginning psychotherapy

The subject reported experiencing increased anxiety due to elevated levels of depression of unknown causality. At this time the subject received his first referral to see a psychologist at the age of 30. The subject received person-centered psychotherapy at 50 min intervals once per week for a period of one year. Subject stopped receiving therapy on his own accord. The psychotherapist recommended bibliotherapy as a measure of continuity of care and offered to see him should he choose to reestablish the therapeutic relationship. During this initial time in therapy, the subject received his first diagnosis of Bipolar I.

## Bipolar I diagnosis

Specific symptoms included increased levels of energy where he reported staying awake for 2-3 days successively. The subject reported feelings of euphoria and delusions in which he had beliefs that he and the world were wonderful and believing he was the Messiah. This was also accompanied by pressured speech. Beliefs that he could fix anyone and any problem. He believed that he could solve anything which led to risky behavior such as becoming a confidential informant for the police.

The subject also reported having vivid dreams so much that the symbols within them became a perseveration for learning and growth. He also believes that he had some issues pertaining to PTSD from childhood sexual abuse and his service in Vietnam. However, this went undiagnosed. He reported dreams of his abuser's house burning down. Interestingly, his abuser's home was indeed destroyed in a fire, thus alluding to more magical and Messiah-like delusions. Soon after his diagnosis, the subject began taking Lithium. The use of this medication was successful in that he believed his moods "evened out" and he did not experience the peaks of the mania or the lows of depression. Subject reported that he was relatively stable for the next 20 years.

The subject was advised to cease his regimen of Lithium due to issues surrounding kidney function due to new research. At this time he was taken off of Lithium and placed on a few different medications such as combinations of SSRI's, mood stabilizers, and anticonvulsants in an attempt to find a psychopharmaceutic cocktail that would help alleviate symptomology. Following his Lithium elimination, the subject developed constant suicidal ideation. The subject was placed in a outpatient managed care facility where he returned for treatment daily for a period of three weeks. At this time, treatment consisted of education, group therapy, art therapy, and individual therapy.

After his initial partial hospitalization, the subject was placed in a group therapy setting one time a week for 8-9 months for monitoring purposes. Therapy ceased when his

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insurance changed, and treatment became cost prohibitive. However, the subject was still on medication under the care of a psychiatrist.

It is important to note that the subject was diagnosed with a brain tumor in 2010 after the subject was showing some stroke-like symptoms, visual disturbances, and balance issues. As a result, his doctor conducted a head CT and concluded that his tumor was a meningioma that was calcified, small, and benign. He reported having two subsequent CTs in 2012 and 2014 for monitoring purposes, and the meningioma has not grown or changed. In addition, he had a MRI at the beginning of 2017, which also resulted in confirming that his meningioma has still not grown or changed.

### Current difficulties

Fifteen years later, the subject gradually began to notice changes in his gait and mentation. At this time, the subject was in his early 60's. He experienced noticeable decline in his short-term memory processes while his long-term memory processes was intact. For instance, he walked into a restaurant and saw a vintage baseball game on TV. He recalled the date the game was played, the score, and the principal players, however, he could not remember what he had for lunch. He also remembers feeling uncomfortable with the situation.

The subject recalls experiencing delusions as a life history that was not his own, which in his words he describes as "not fantasy and not dissociative" he equated this as a feeling of intoxication. The subject was placed on the anti-psychotic, Seroquel, and subsequently developed tardive dyskinesia.

### Parkinson's diagnosis

He was diagnosed with Parkinson's disease, and the subject was prescribed the dopaminergic, Carbidopa-Levodopa, which was discontinued after two weeks due to the ill side effects and the lack of efficacy. The subject developed depression after his Parkinson's diagnosis as he grappled with losing some function. He was then urged to apply for disability benefits, and he lost his job as a result of the diagnosis.

### Other symptomologies

Currently, the subject still has Parkinsonian symptomologies. However, his current neurologist and psychiatrist do not believe that Parkinson's disease is the correct diagnosis. They believe that his difficulties stem from something else entirely, or that he has something else in addition to his Parkinsonian symptomology. He still carries a Parkinson's diagnosis, but his neurologist added the diagnosis of Cognitive Communication Deficit as his primary diagnosis. He actively has difficulty sleeping with markedly noticeable increase in REM sleep behavior disorder. The subject often cannot decipher his dreams from reality, and it requires a degree of mental effort to differentiate between the two. The subject reported a necessity in asking people if a particular conversation or event occurred because he is no longer able to decipher dreams from reality.

The subject also reports repetitive visual hallucinations. He reported seeing rapid movement on the periphery, so quick that he cannot ascertain a definitive shape or form. He reports seeing cats that are not there. He mistakes certain objects for others. Seeing visions such as seeing a pigeon walking across the grocery store floor, bald eagles flying overhead, seeing his wife driving without looking at the road, but resting her head on the steering wheel.

### Decline of cognitive abilities

He reports having noticeable decline his cognitive abilities by saying "I do not think anymore. I sit by myself and cannot form thoughts; I just cannot focus on anything, it's like slamming against a wall". He has difficulty with his short-term memory function, often forgets to eat or what he is doing in the middle of a task, such as when he goes into a room, he cannot remember why he went there. The subject does, however, report maintaining adequate long-term memory and is able to recall facts and events from decades ago. He has reported that he often cannot remember how to work the oven and it takes a period of time for him to think about, and remember how to use it. The subject is also no longer able to drive due to his

lack of orientation. He also indicated that he is not entirely sure he can think abstractly anymore.

The subject either is unable to attend to or is unaware of any autonomic dysfunction. He does, however, report feelings of excessive sleepiness during the day. He naps throughout the day and often falls asleep while seated. The subject has diminished spatial awareness, frequently has problems in ascertaining where he is in relation to the world around him. He has difficulty with directions as well. He remembers driving up a freeway off-ramp for example. He also became so disoriented that he went the wrong direction on the freeway for several miles, ending up hours away from his original destination.

### Ambulation

Physically, the subject has diminished muscle tone and an increasingly loss of balance. His gait is more slumped over than before. He needs the assistance of a cane or walker to aid him in his ambulation. He also requires a person close by as he bathes in case he falls, and uses a shower chair. He also reports constant back pain above his pelvis and extends to his midline. He now sleeps sitting up in a rocking chair as it is more comfortable.

### Tremors

The subject began experiencing Parkinsonian-like tremors in the left hand at rest which gradually increased in frequency and then began in the right hand as well. He recently began experiencing tremors with purposeful movements which results in more vigorous tremors. More recently, he is experiencing tremors in his legs.

### Activities of daily living (ADL's)

Currently, the subject has difficulty in eating as he needs to be reminded to eat and his ability to cook food is diminished due to weakened mentation. He can bathe unassisted but needs someone in close proximity as a protective measure. He can wash his clothes independently but needs reminders to change them as he can wear the same clothing for several days without becoming bothered by it. The subject needs assistance in staying focused as he is easily distracted when performing multi-step tasks. He experiences difficulty in writing as his tremors have adversely affected his penmanship, while the cognitive difficulties have greatly impacted his focus of thought. Communication has become laborious for the subject as he has increased difficulty with anomic and expressive aphasia.

### Diagnosis

Client was referred to a neurologist who took a history regarding the onset and current presenting symptomology. A detailed discussion about the clients hallucinatory experiences were analyzed. The neurologist noted that his symptoms lacked those found in Parkinson's disease, but acknowledged Parkinsonism attributes. The client presented with cognitive decline which was evident over a longitudinal period of one year. The client was then diagnosed with Lewy Body Dementia.

### Treatment

In terms of treatment, the client was prescribed the cholinesterase inhibitor, Exelon in addition to his regimen of 1250 mg of Valproic Acid, 300 mg of Lamotrigine, and 60 mg of Fluoxetine daily [1]. He was referred to physical therapy to ascertain if the use of assistive devices would be beneficial. He was also referred to a Speech, Language, and Learning Center which will assist in helping the patient develop coping skills during his gradual loss of cognitive and physical faculties [2]. Currently, there is no known cure for Lewy Body Dementia [3].

### Conclusion

In conclusion, this case study highlights one individual's journey of the arduous path from the onset of symptomology to formal diagnosis, which lasted two years. It is imperative to diagnose early for the best course of treatment [4]. During this time, the client and his family underwent a period of frustration and sadness as tests

were performed and no final diagnosis were made. The client and his family felt a sense of closure [5]. However, the client identifies as an individual still in the throngs of the grieving process [6].

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